European Science, Engineering and Technology Highlights[1]
MARCH 2014

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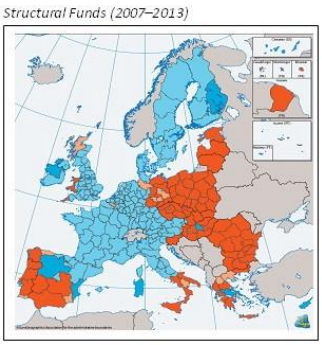
1 100 Billion Euros for Innovation to be Provided by the European Union's Regional Funds

With the latest major reform of the European Union regional policy under the new 2014-2020 budget for regional development, some €100 billion (USD 135 Billion) will be spent on research and innovation, information and communications technology, SMEs and the low-carbon economy. This novelty in the European budget will allow for better synergies between Horizon 2020, the EU's research flagship program, and the European regional development fund, one of the major components of the EU budget. The aim is to address the research divide and stop the brain drain from Europe's Eastern and Southern countries. This *"can only be tackled by innovation"* said Johannes Hahn, EU Commissioner for regional and Urban Policy. The funding is expected to funnel through 'smart specialization strategies' that use local know-how to identify and build on a region's existing strengths.



Innovation is already a key part of the €80 billion Horizon 2020 R&D program, but Hahn said while this is crucial, more is needed. *"Horizon 2020 is driven by excellence criteria, and that's correct. But there are no geographic criteria to spread innovation. That's why we need regional policy to spread innovation,"* he said. In addition, the Commission aims to make better use of the synergies between Horizon 2020 and regional development funds. For example, Hahn said, structural funds could be used *"to improve the attractiveness"* of universities by investing in new equipment and infrastructure and higher salaries to attract outstanding researchers.

Full article available at: http://www.sciencebusiness.net/news/76442/EU-Regional-Development-Fund-to-invest-%E2%82%AC100B-in-innovation

2 New Transatlantic Platform in Social Sciences and Humanities Launched

The Trans-Atlantic Platform in Social Sciences and Humanities Research (T-AP), a partnership among 15 research funding agencies from Europe and the Americas was launched in Amsterdam on March 5, 2014. The Platform seeks to enhance trans-Atlantic research collaboration in key areas of mutual interest and engagement that address 21st century societal challenges involving social sciences and the humanities.

The Trans-Atlantic Platform includes partners from Brazil, Mexico, the United States, Canada and Europe:

- São Paulo Research Foundation (FAPESP) (Brazil)
- Social Sciences and Humanities Research Council (SSHRC) (Canada)
- Deutsches Zentrum für Luft- und Raumfahrt (DLR) (Germany)
- Academy of Finland (AKA)
- International Social Science Council (ISSC) (France)
- The French National Research Agency (ANR) (France)
- Consejo Nacional de Ciencia y Tecnología (CONACYT) (Mexico)
- Netherlands Organisation for Scientific Research—Humanities (NWO—Humanities)
- Netherlands Organisation for Scientific Research—Social Sciences (NWO—Social Sciences)
- Fundação para a Ciência e a Tecnologia (FCT) (Portugal)
- Arts & Humanities Research Council (AHRC) (United Kingdom)

- The Economic and Social Research Council (ESRC) (United Kingdom)

The Platform's associated partners include:

- National Endowment for the Humanities (NEH) (United States of America)
- National Science Foundation (NSF) (United States of America)
- Deutsche Forschungsgemeinschaft (DFG) (Germany)

More information available at: http://www.transatlanticplatform.com/voorpagina

3 European Institute of Technology Supports Climate Innovation Network with USD 88 million

This year, a record sum of 63.5 million Euros (USD 88 million) is allocated to the Climate-Knowledge and Innovation Community (KIC) to foster entrepreneurship that leads to reducing greenhouse-gas emissions. This is the essence of the grant agreement signed by the European Institute for Technology and the Climate-KIC's CEO Mary Ritter of Imperial College in London recently. The funding is provided by the European Union and aims at escalating activities in helping Europe lead the world in commercializing climate change technologies.

The Climate-KIC is complemented by two other KICs: InnoEnergy and the Information and Communication Technology Labs. "The fact that Climate-KIC was granted the highest budget highlights how competitive our community is," says John Schellnhuber, chair of the board of Climate-KIC and director of the Potsdam Institute for Climate Impact Research (PIK). "To mitigate dangerous climate change, technology is key - and we're confident that Climate-KIC is helping to bring about an industrial revolution towards sustainability." Further funding later this year might raise the sum which is given to Climate-KIC to over 70 million Euros (USD 97 million).

Full article available at: http://live.rig2013.aperto.de/default/dachportal/en/Research-Landscape/News/2014/03/2014-03-12-climate-kic-wins-60--million-grant.html

4 Tekes Becomes the Finnish Agency for Innovation

The President of the Republic of Finland has ratified a legislative package that contains amendments concerning Tekes, the Finnish funding agency for research, development and innovation. At the same time the President ratified legislation on a company investing in early-stage private equity funds as well as three other legal amendments connected with this. In this legislative amendment, there are two key points with respect to Tekes: a name change for Tekes as well as expansion of the operations of Tekes into early-stage investments in start-up companies. As of 1 January 2014, the official name of Tekes is the Finnish Funding Agency for Innovation.

Full article available at: http://www.tekes.fi/en/whats-going-on/news-2013/president-of-finland-ratified-amendments-to-law-concerning-tekes/

5 The French National Research Center and National Research Agency Join the NSF PIRE Program

On the occasion of the visit of the French President Francois Hollande and the Minister for research and higher education, Genevieve Fioraso, to the United States on February 10 2014, the President of the French National Research Center (CNRS) Professor Alain Fuchs has signed with the NSF Acting Director Dr. Cora Marrett a letter of Intent for CNRs to join the Partnership in International Research and Education (PIRE) program. A similar letter was signed by the National Research Agency (ANR). Launched in 2005, this program aims to support American researchers and scientists in global collaborations. It was created to "catalyze a cultural change in the United States by establishing new models for education and international collaborative research." It supports interdisciplinary projects that aim to promote adaptation to environmental social and cultural changes. Bodies or agencies of countries like Japan, Finland, South Korea and Russia are also partners.

Alain Fuchs (CNRS), Geneviève Fioriaso, Cora Marrett (NSF)

More information available (in French) at: http://www.cnrs.fr/derci/spip.php?article227&lang=fr

6 New Research Center for Natural Science Inaugurated in Hungary

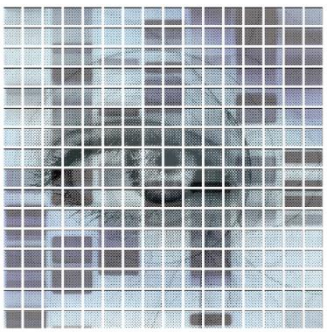
The new natural science research centre of the Hungarian Academy of Sciences (MTA) was inaugurated in Budapest in November 2013. This is the largest investment in the research infrastructure of MTA in the past forty years. The new research centre integrates in its 30,000 m2 surface 214 laboratories and provides modern working environment for more than half a thousand researchers. The volume of the investment was €32.7 million (USD 50 million).

Five research units of MTA are housed on the five levels of the new building, namely the Institute of Materials and Environmental Chemistry, the Institute of Molecular Pharmacology, the Institute of Enzymology, the Institute of Cognitive Neurosciences and Psychology, and the Institute of Organic Chemistry.

More information available at: http://mta.hu/news_and_views/30000-sq-ms-of-futureland-raised-in-mtas-new-research-centre-for-natural-sciences-133082/

7 Malta Publishes the National Research and Innovation Strategy 2020

The Maltese National Research and Innovation (R&I) Strategy 2020 has been finalized and adopted by the Cabinet on 18 February 2014. The aim of the strategy is to provide an enabling framework to embed research and innovation at the heart of the Maltese economy to spur knowledge-driven and value-added growth and to sustain improvements in the quality of life. It builds on past achievements as well as lessons learnt along the way.



The strategy aims to put in place the following 'building blocks':

- A comprehensive R&I support ecosystem that would be independent of thematic specializations, thus providing a baseline level of support for all players and embedding flexibility to support any new specialization areas which emerge over time.

- Investing in a stronger knowledge base is a longer-term investment, the fruits of which may or may not be reaped within the timeframes of this Strategy. This goal balances the overarching orientation of this Strategy towards close-to-market R&D and innovation by building capacity and excellence in the earlier stages of the R&D process.

- The smart, flexible specialization goal targets the establishment of a knowledge-based economy by prioritizing its achievement in a number of thematic areas.

The strategy will be complemented by a separate, rolling R&I Action Plan involving all relevant stakeholders to identify, agree and implement measures addressing the strategic principles while ensuring clear ownership and budgetary sources, coherence and value for money.

More information available at:
http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/mt/highlights/highlight_0025

8 First Center of Excellence in Montenegro

On 4th February 2014 the Ministry of Science of Montenegro announced the results of the Call for establishment of the first center of excellence in Montenegro. The Call, that was announced on May 30th and closed on 20th September 2013, has been open for all licensed scientific institutions from Montenegro. In total 10 applications were submitted. The group of international experts based on several criteria including finance, scientific approach, innovation, creativity, competitiveness, sustainability and commercial aspect did evaluation. Also, one of the criteria was that projects are aligned with the priorities defined by the current Strategy for Scientific Research Activity.

The project BIO-ICT, submitted by the Faculty of Electrical Engineering of the University of Montenegro, is the first ranked. The second ranked was Biotechnical faculty also from the University of Montenegro with the project FoodBoostMe. The negotiations with the first ranked institution started on 19th February 2014. The future Centre will have 3.7 million Euros (USD 5.1 million) in the next three years for the improvement of the scientific research work.

Full article available at:
http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/me/highlights/highlight_0004

9 Norway Introduces a PhD Scheme for the Public Sector

Over 200 public institutions and their employees have expressed interest in the Research Council of Norway's new scheme for doctoral degree education in the public sector. In the course of 2014, public enterprises and organizations will be able to apply for funding from the Research Council for an employee seeking to pursue a doctoral degree in a subject relevant to the enterprise's area of responsibility. The new scheme is modeled on the Industrial Ph.D. scheme launched in 2009.

"It is very encouraging to see the amount of feedback we have received from all segments of the public sector," says Arvid Hallén, Director General of the Research Council of Norway. Mr Hallén points out that there is a close connection between the Public Sector Ph.D. scheme and the Research Council's priority budget initiative, "Active and healthy for many years".

Nearly half of those who have expressed interest in the new Ph.D. scheme represent municipal or county administrations. The topics proposed for research extend across a broad range of subjects.

To be eligible for the Public Sector Ph.D. scheme, candidates must have received confirmation of admission to an organized doctoral degree program at a degree-conferring institution that has the same quality requirements and guidelines as other doctoral degree programs. The doctoral research project must be aligned with the long-term competency needs of the organization.

Full article available at:
http://www.forskningsradet.no/en/Newsarticle/Keen_interest_in_PhD_scheme_for_the_public_sector/1253993754061

10 Prioritizing Future Support for R&D Efforts in Poland

The Polish Ministry of Economy initiated public consultations on a policy document, titled National Smart Specialization, addressing specific technology focus areas which will guide the distribution of R&D funds.
The document includes 16 priority areas clustered into 5 thematic groups:

- Healthy society
  - Medical engineering including medical biotechnologies
  - Diagnostics and therapeutics of lifestyle diseases and personalized medicine
  - Pharmaceutical technologies
- Bioeconomy in agricultural, food production and environmental sectors
  - Innovative technologies, processes and products for agriculture and food production
  - Healthy food with high quality and environmental friendliness
  - Biotechnological processes and products of chemistry and environmental engineering
- Sustainable energy sector
  - High performance, low emission and integrated systems for production, storage, transmission and distribution of energy
  - Intelligent and energy-efficient buildings
  - Environmentally-friendly transport
- Natural resources and waste management
  - Novel technologies for exploitation and use of natural resources and production of their substitutes
  - Use of waste as material and inputs into energy generation
- Innovative technologies and industrial processes
  - Multi-functional materials and composite materials with advanced features, including nano-processes and nano-products
  - Biosensors and intelligent sensor networks
  - Intelligent networks and teledetection
  - Plastic and organic electronics
  - Automatics and robotics in technological processes

More information available at:
http://erawatch.jrc.ec.europa.eu/erawatch/opencms/information/country_pages/pl/highlights/highlight_0021

11 New Polish R&D Program TANGO Targets Commercialization of Fundamental Research Results

The Polish National Research & Development Centre (NCBiR), the applied R&D funding agency, jointly with National Science Centre (NCN), the basic research funding agency, established a funding program TANGO. TANGO supports the implementation of practical results of NCN-financed, fundamental research projects. In this way, the program closes the gap between basic and applied research, encouraging scientists to look for commercially feasible uses of their research. The TANGO funding opportunity is intended to support the innovative endeavor of developing advanced technologies and bringing them to the market, as well as to strengthen the cooperation between research institutions and corporate entities. The application procedure in TANGO consists of two stages: the first one takes place at the NCN, the other at the NCBR. At both stages, proposals undergo evaluation by the same Expert Team. The NCBR has set the budget of TANGO at PLN 40 million (USD 13 million).

More information available at: http://www.ncn.gov.pl/aktualnosci/2013-12-17-tango-komunikat?language=en

12 USD 500 Million Investment to Support Growth and Jobs in UK Science

European Spallation Source

Cutting-edge science projects to drive innovation, growth and create jobs in the UK's high performing science sector, will benefit from a £300 million (USD 500 million) boost as part the government's long term economic plan, Science Minister David Willetts announced on March 10 2014. Speaking to an audience of scientists, apprentices and school children, the Minister confirmed the following new investments:

- £165 million (USD 274 million) for the European Spallation Source (ESS), one of the largest science and technology infrastructure projects of our time. The creation of this giant powerful neutron microscope will be able to better observe the world and the universe. This brings with it the potential to discover materials for faster planes, new and better computer chips, new drugs, super long-life batteries and feather-lightweight kit for our military. 30 times more powerful than microscopes we use today and the size of 140 football pitches, this technology will create and secure thousands of jobs.

- £100 million (USD 166 million) contribution to The Square Kilometre Array. This will be the largest and most sensitive radio telescope in the world, stretching technology to its limits. This telescope will produce ten times the current global traffic of the internet. British scientists are already helping to develop the central computer which will read the huge volume of new data, meaning this project could lead to faster smartphones and increased internet speeds across the UK in the future. The global market for data analysis is also expected to be worth £31 billion by 2016 – with Britain in a prime position to dominate the market.

- £25 million (USD 42 million) to participate in the M3 Space Mission (PLATO). The UK will take a leading role on PLATO, a giant telescope made up of 34 telescopes. The UK is a world leader in satellite technology and the space sector supports 95,000 full time jobs, generating £9.1 billion (USD 15 billion) for the economy each year. This investment will secure key roles for British firms as part of the mission and maintain UK international competitiveness in world class research.

These investments will see British scientists and businesses working together on some of the most exciting scientific projects of the future. The UK is one of the most productive science nations in the world

- with only 1 per cent of the world's population we publish 16 per cent of the world's top quality research. And every £1 spent on research generates 50p for the wider economy every single year after. Today's announcements also build on the £270 million (USD 450) investment in quantum technologies announced by the Chancellor in his Autumn Statement last year.

Full article available at: http://news.bis.gov.uk/Press-Releases/-300-million-investment-to-support-growth-and-jobs-in-UK-science-69a0c.aspx

13 Shell Signs a Memorandum of Understanding with UK Engineering and Physical Science Research Council

Atti Emecz, EPSRC's Director of Strategy and Business Relationships and Thijs Jurgens, Vice President of Innovation at Shell

Multinational oil and gas company Shell has signed a Memorandum of Understanding (MoU) with the Engineering and Physical Sciences Research Council (EPSRC). The five year partnership will enable Shell to gain greater understanding of the research landscape in which the research council operates and help EPSRC fulfill part of its strategy to drive UK economic growth. The MoU details how Shell and EPSRC will work together to understand the challenges each faces and identify where research may be able to contribute. It aims to identify synergies between Shell and EPSRC-funded research and training activities where they relate to Shell technology strategies. Collaborating in this way will benefit EPSRC in a number of ways, for example helping to identify opportunities for joint funding and postgraduate training which align with both partners' requirements. The partnership will also help EPSRC identify measure and demonstrate the impact of working with the company. Working with EPSRC will give Shell an insight into EPSRCs strategy and business needs, as well as the benefits of working with the funder. The alliance will also let Shell act as an advocate for EPSRC, the research councils and long-term research. The partnership will let Shell access knowledge and expertise drawn from across the £800 million (USD 1.3 billion) portfolio of EPSRC-funded activities in UK universities.

Full article available at: http://www.epsrc.ac.uk/newsevents/news/2014/Pages/shellsigns.aspx

14 Western Balkan Countries Develop Joint Strategies for Innovation

The Western Balkans Regional Research and Development (R&D) Strategy for Innovation was adopted last December in Zagreb, Croatia, by the ministers of science from the region during the ministerial meeting on regional R&D. Research and innovation are at the heart of the European Union's (EU) strategy for growth and jobs – the Europe 2020 Strategy – as they are important drivers of economic growth, and contributors to raising productivity and creating employment opportunities. This focus on research and innovation has been recognized by the countries of the Western Balkans as they work to find ways towards economic recovery. For the first time, to jointly improve the quality of research and innovation, Albania, Bosnia and Herzegovina, Croatia, Kosovo, The Former Yugoslav Republic of Macedonia, Montenegro, and Serbia collaborated to develop a Western Balkans Regional Research and Development (R&D) Strategy for Innovation. This document will serve as a framework for a collective effort to recommend policy and institutional reforms, and promote the Western Balkans' most urgent priority of increasing innovation, economic growth, and prosperity.

The work on the Strategy was supported by the World Bank and the European Commission, and was financed through a Multi-beneficiary Instrument for Pre-accession Assistance (IPA). The European Commission and the Regional Cooperation Council oversaw the implementation of the project.

More information is available at: http://www.rcc.int/press/0/226/western-balkan-countries-develop-joint-strategy-for-innovation-based-economic-growth
Document available at:
http://www.worldbank.org/content/dam/Worldbank/document/eca/WBRIS%20Strategy10-21-13%20web.pdf